Furthermore, in the present embodiment, a wide tooth 224d is divided in a circumferential direction by substantially orthogonal surfaces 224b. These surfaces 224b serve as contact surfaces when forming the stator core 222 into an annular shape. The stator core 222 of annular shape is produced by welding these surfaces 224b. Hence, a stator core 222 may be obtained in which the function of the contact surfaces 224b is facilitated, the connecting operation is simplified, and joining properties thereof are high.

IN THE CLAIMS:

Please cancel Claims 6-8 without prejudice or disclaimer.

Please enter the following amended claim:

1. (Amended) A stator for an automotive alternator, said stator comprising:

a stator core in which a plurality of slots extending in axial directions are formed at an inner circumference thereof and two sets of three-phase stator coils which are fitted into said slots, wherein

2 slots are provided for each phase of said stator coils and each magnetic pole and the total number of the slots is 72 or more, and

said stator core is formed as a lamination of a plurality of sheet-shaped magnetic members with a plurality of teeth defining said slots at one side of a yoke, said stator coils being disposed in said slots, and said stator core then being formed into an annular shape such that said

stator coils become disposed at an inner side at said inner circumference thereof, and end surfaces of said stator core are fixed together to complete said annular shape.

Please add the following new claims:

9. (New) A stator for an automotive alternator, said stator comprising:

a stator core in which a plurality of slots extending in axial directions are formed at an inner circumference thereof and two sets of three-phase stator coils which are fitted into said slots, wherein

2 slots are provided for each phase of said stator coils and each magnetic pole and the total number of the slots is 72 or more, and

said stator core is formed as a lamination of a plurality of sheet-shaped magnetic members with a plurality of teeth defining said slots at one side of a yoke, said stator coils being disposed in said slots, and said stator core then being formed into an annular shape such that said stator coils become disposed at an inner side at said inner circumference thereof, and end surfaces of said stator core are fixed together to complete said annular shape,

wherein widths of said teeth which partition said slots alternate in size in the circumferential direction.

10. (New) The stator for an automotive alternator according to Claim 9 wherein contact surfaces of said stator core, when said stator core is connected as an annular shape, are formed

by dividing a wide tooth among said teeth of alternating widths in a circumferential direction with a substantially orthogonal surface.

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11. (New) The stator for an automotive alternator according to Claim 9 wherein a size of an interval in the circumferential direction between a center of air gaps of adjacently formed slot opening portions alternates from one interval to the next.

12. (New) The stator for an automotive alternator according to Claim 11 wherein said interval of slot opening portions is an alternating electrical angle of α degrees and (60 - α) degrees, and said α degrees is in a range from 16-29 degrees.

13. (New) The stator for an automotive alternator according to Claim 11 wherein said interval of slot opening portions is an alternating electrical angle of α degrees and (60 - α) degrees, and said α degrees is in a range of from 22 to 24 degrees.

14. (New) The stator for an automotive alternator according to Claim 11 wherein said interval of slot opening portions is an alternating electrical angle of 24 degrees and 36 degrees.

15. (New) A stator for an automotive alternator, said stator comprising:

a stator core in which a plurality of slots extending in axial directions are formed at an inner circumference thereof, a plurality of teeth defining and partitioning said slots, and two sets of three-phase stator coils which are fitted into said slots, wherein

2 slots are provided for each phase of said stator coils and each magnetic pole and the total number of the slots is 72 or more, and

projections extending in a circumferential direction are formed on said teeth which partition said slots, said projections each having a length, and an interval in a circumferential direction between a center of air gaps of adjacently formed slot opening portions is alternated by alternating said lengths of said projections.

16. (New) The stator for an automotive alternator according to Claim 15 wherein said interval of slot opening portions is an alternating electrical angle of α degrees and (60 - α) degrees, and said α degrees is in a range from 16-29 degrees.

17. (New) The stator for an automotive alternator according to Claim 15 wherein said interval of slot opening portions is an alternating electrical angle of α degrees and (60 - α) degrees, and said α degrees is in a range of from 22 to 24 degrees.

18. (New) The stator for an automotive alternator according to Claim 15 wherein said interval of slot opening portions is an alternating electrical angle of 24 degrees and 36 degrees.

19. (New) A method for forming a stator for an automotive alternator comprising the steps of:

forming a stator core by punching a sheet-shaped magnetic member into a predetermined rectangular shape, said stator core having end surfaces, a yoke disposed between said end surfaces, a plurality of teeth on one side of said yoke defining slots having a trapezoidal shape;

laminating said stator core;

mounting insulators in said slots;

forming stator coils by inserting straight portions of a plurality of wire strands groups into each of said slots, said insulators insulating said stator coils in said slots from said stator core;

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bringing together and welding said end surfaces of said stator core thus changing said rectangular shape of said stator core to an annular shape and lining up said slots in a radial direction.

20. (New) The method for forming a stator for an automotive alternator according to Claim 19 wherein said sheet-shaped magnetic member is cold-rolled steel.

21. (New) The method for forming a stator for an automotive alternator according to Claim 19 wherein

there are seventy-two of said slots;

two sets of three-phase stator coils are fitted into each of said slots in said step of forming stator coils; and

two slots are provided for each phase of said stator coils and each magnetic pole.

22. (New) The method for forming a stator for an automotive alternator according to Claim 19 wherein said step of bringing together and welding said end surfaces of said stator core changes said trapezoidal shape of said slots to a rectangular shape.

23. (New) The method for forming a stator for an automotive alternator according to Claim 19 wherein said stator coils form an inner surface of said annular shape.